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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/767,339	01/28/2004	Shane Elwart	FGT 3C7 (81090700)	5227
36865	7590	12/15/2005	EXAMINER	
ALLEMAN HALL MCCOY RUSSELL & TUTTLE, LLP 806 S.W. BROADWAY, SUITE 600 PORTLAND, OR 97205			JOHNSON, EDWARD M	
			ART UNIT	PAPER NUMBER

1754

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/767,339

Applicant(s)

ELWART ET AL.

Examiner

Edward M. Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this

Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3, 5-7, 10, 12, 16-18, 21, 24-27, 29, 31-33, and 36-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartley et al. US 6,482,377.

Regarding claims 1, 16, 21, and 31, Bartley '377 discloses a method for removing sulfur from an exhaust stream comprising directing the exhaust to a sulfur trap comprising metal oxide, adsorbing hydrogen sulfide (see column 5, lines 56-63) and reacting with a reducing agent (abstract).

Bartley '377 fails to disclose adjusting an air-fuel ratio based on exhaust temperature.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust the air-fuel ratio to either rich or lean in the method of Bartley because Bartley discloses operation of the method for both lean and rich

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stoichiometries (see column 5, lines 44-46 and 56-58), which would obviously, to one of ordinary skill, suggest adjustment of the ratio to perform the method at the disclosed rich and lean stages.

Regarding claims 2, 10, 12, and 17-18, Bartley '377 discloses sulfur dioxide (see paragraph bridging columns 5-6) and nickel oxide (see column 5, lines 56-59).

Regarding claims 3, 5, 25-26, 29, and 32-33 Bartley '377 discloses forming the metal sulfide (see column 5, line 61) and sulfate (see column 6, lines 20-23).

Regarding claims 6-7, 24, 27, and 36-40, Bartley '377 discloses oxygen (see column 6, line 11) and running a rich or lean mixture (see column 5, lines 44-45 and 56-57), which can be "defined" in terms of time, cycles, or saturation.

3. Claims 4, 8-9, 11, 13-15, 19-20, 22-23, 28, 30, and 34-35, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bartley '377 as applied to claims 1, 16, 21, and 31, above, and further in view of Li US 6,419,890.

Regarding claims 4, 19-20, 22, and 34, Bartley '377 fails to disclose hydrogen gas.

Li '890 discloses hydrogen gas (see column 8, lines 49-50).

It is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to

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use the hydrogen of Li as the reducing agent in the sulfur removal method of Bartley because Li discloses the hydrogen as reducing agent for a process of sulfur reduction (see abstract).

Regarding claims 8-9, 11, 13-15, 23, 28, 30, and 35, Li '890 discloses hydrogen gas (see column 8, lines 49-50), lean/rich operation at 625-750 degrees Celsius (see column 12, lines 21-26 and 43-49) and 200-400 degrees Celsius (see Fig. 1) and Bartley '377 discloses both rich and lean mixtures (see above).

Response to Arguments

4. Applicant's arguments filed 10/12/05 have been fully considered but they are not persuasive.

It is argued that first, Applicants respectfully submit that Bartley et al... as noted above. This is not persuasive because it would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust the air-fuel ratio to either rich or lean in the method of Bartley because Bartley discloses operation of the method for both lean and rich stoichiometries (see column 5, lines 44-46 and 56-58), which would obviously, to one of ordinary skill, suggest adjustment of the ratio to perform the method at the disclosed rich and lean stages.

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It is argued that assuming Bartley et al. suggests adjustment... emission control device. This is not persuasive because Applicant does not claim adjustments "in response" to temperature. Rather, Applicant merely claims adjustments as temperature varies. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., adjustments "in response" to temperature) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated

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from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 571-272-1352. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 571-272-1358. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

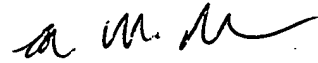
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic

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Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'E. M. Johnson', with a stylized flourish at the end.

Edward M. Johnson
Primary Examiner
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EMJ